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10/023,143	12/18/2001	Kazutaka Inukai	SEL 294	4666

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EXAMINER

LEWIS, DAVID LEE

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,143

Applicant(s)

INUKAI, KAZUTAKA

Examiner

David L Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-14 and 20-36 is/are allowed.
- 6) ☒ Claim(s) 1-6, 15-19 and 37-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura (6225750 B1).

2. As in claim 1, Kimura teaches of a light emitting device comprising a plurality of pixels, figure 7 item 11, each of the plurality of pixels having a plurality of sub-pixels, figure 7 item 18111, 18211, 18221; each of the plurality of sub-pixels having a light emitting element, figure 7 item 18111, 18211, 18221; and each of the plurality of subpixels having a same area of effective light emission, figure 7 item 18111, 18211, 18221, column 4 lines 15-25.

3. As in claim 2, Kimura teaches, of a light emitting device, figure 7, comprising: a plurality of pixels, figure 7 item 11; each of the plurality of pixels having a plurality of subpixels, figure 7 item 18111, 18211; 18221; each of the plurality of subpixels having a light emitting element and a thin film transistor, figure 7 item 18111, 18211, 18221, 161, 162, 171, 172; wherein a current flowing in the light emitting element is controlled by the thin film transistor, figure 7 items 171, 172; and each of the plurality of subpixels having the same area of effective light emission, figure 7 item 18111, 18211, 18221. **As in**

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claim 3, Kimura teaches wherein the thin film transistor in each of the plurality of subpixels has a same polarity, figure 7 items 171, 172.

4. **As in claim 5**, Kimura teaches of a method of operating a light emitting device, said light emitting device comprising: a plurality of pixels, figure 7 item 11; each of the plurality of pixels having, a plurality of subpixels, figure 7 item 18111, 18211, 18221; each of the plurality of subpixels having a light emitting element, figure 7 item 18111, 18211, 18221; each of the plurality of sub-pixels having a same area of effective light emission, figure 7 item 18111, 18211, 18221, said method comprising the steps of: controlling a period of time in which the, light emitting element emits a light in each of the plurality of sub-pixels by a digital video signal to thereby control a gradation of the respective pixels, column 1 lines 33-48, column 4 lines 15-25.

5. **As in claim 6**, Kimura teaches; of a teaches of a method of operating a light emitting device, figure 7, said light: emitting device comprising: a plurality of pixels, figure 7 item 11; each of the plurality of pixels having a plurality of sub-pixels, each of the plurality of sub-pixels having a light emitting element, figure 7 item 18111, 18211,18221; each of the plurality of sub-pixels having a same area of effective light emission, figure 7 item 18111, 18211, 18221, said method comprising the steps of having a plurality of sub-frame periods in one frame period in the plurality of subpixels, figure 4, column 1 lines 33-48; selecting whether or not light emitting element in each of the plurality of sub-pixels emits a light for each of the plurality of sub-frame periods by

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each of bits of digital video signals, wherein the larger of the sum of lengths of sub-frame periods in which the light emitting element in each of the plurality of sub-pixels emits a light becomes, the higher a gradation number of the respective pixels becomes, figure 4, column 1 lines 33-48, column 4 lines 15-25.

6. **Claims 37, 38, 40, 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Mori et al. (6326981).**

7. **As in claim 37, Mori et al. teaches of a light emitting device comprising a plurality of pixels, figure 11 item One Pixel**, wherein each of the plurality of pixels comprises a plurality of sub-pixels, **figure 11 item 6R, 6G, 6B**; and wherein each of the plurality of sub-pixels has a same area of effective light emission, **figure 11 item 6R, 6G, 6B, figure 25 item 101**. **As in claim 38, Mori et al. teaches of a device according to claim 37, wherein the thin film transistor in each of the plurality of sub-pixels has a same polarity, figure 25 item 102. As in claim 40, Mori et al. teaches of a light emitting device comprising a plurality of pixels, where figure 11 item One Pixel** , in each of the plurality of pixels comprises a plurality of sub-pixels, **figure 11 item 6R, 6G, 6B**, and a thin film transistor, **figure 11 item 6R, 6G, 6B, figure 25 item 101**; and wherein each of the plurality of sub-pixels has a same area of effective light emission, **figure 11 item 6R, 6G, 6B, figure 25 item 101**. **As in claim 41, Mori et al. teaches of, wherein the thin film transistor in each of the plurality of sub-pixels has a same polarity, figure 11 item 6R, 6G, 6B, figure 25 item 101.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 and 15-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura (6225750 B1) in view of Huang et al. (5929474).

9. **As in claims 4 and 15-19**, Kimura is silent as to the specific electronic device as claimed, however said electronic devices are known applications of the OLED display device taught by Kimura. As support Huang et al. discloses an active matrix OLED wherein the teaches of its use in small products, especially small portable electronic devices, such as pagers, cellular and portable telephones, two way radios, data banks, etc., column 1 lines 30-45. Wherein it would have been obvious to the skilled artisan at the time of the invention to use the OLED display device of Kimura in portable electronic devices and the like as suggested by Huang, because Huang teaches of said usage is known.

10. Claims 39 and 42 rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (6326981) in view of Huang et al. (5929474).

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11. As in claims 39 and 42, Mori is silent as to the specific electronic device as claimed, however said electronic devices are known applications of the "light emitting" display device taught by Mori. As support Huang et al. discloses an "light emitting" device wherein the teaches of its use in small products, especially small portable electronic devices, such as pagers, cellular and portable telephones, two way radios, data banks, etc., column 1 lines 30-45. Wherein it would have been obvious to the skilled artisan at the time of the invention to use the "light emitting" display device of Mori in portable electronic devices and the like as suggested by Haung, because Haung teaches of said usage is known.

Allowable Subject Matter

8. Claim 7-14 and 20-36 previously allowed over the prior art of record. Mori and Kimura fails to teach of a third transistor, wherein the light emitting element does not emit the light when the third thin film transistor is on.

Response to Arguments

12. Applicant's arguments filed 4/19/2004 have been fully considered but they are not persuasive. Kimura as broadly interpreted teaches of a pixel 11 that has a subpixel unit of equal size 1811, 18211, or 18221. The 1:2 ratio as shown in figure 7 and more clearly in figure 9 combines the subpixel unit within the pixel 11, such that pixel 11 is

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formed of three subpixels units of equal size. Further although not argued, as shown in the new Mori et al. reference, Kimura's pixel can further represent a conventional color subpixel, being one of red, blue, or green subpixels, further reading on the applicants invention.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L Lewis whose telephone number is 703 306-3026. The examiner can normally be reached on M, T, TH, F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. Any inquiry of a general nature or relating to the status of

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this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600